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3rd Quarter 2011 | 26(3)

## SUGAR-SWEETENED BEVERAGE TAXATION AS PUBLIC HEALTH POLICY-LESSONS FROM TOBACCO

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JEL Classification: I18

Keywords: Taxation, Tobacco, Obesity

*This article is part of a series of Policy Issues articles on Soda Tax. You can also find articles on [Should Soft Drinks be Taxed More Heavily?](#), [Can Taxing Sugary Soda Influence Consumption and Avoid Unanticipated Consequences?](#), [Soda Taxes and Substitution Effects: Will Obesity be Affected?](#), [Better Milk than Cola: Soft Drink Taxes and Substitution Effects](#), [Evaluating Excise Taxes: The Need to Consider Brand Advertising](#), and [Caloric Sweetened Beverage Taxes: The Good/Food/Bad Food Trap](#) as part of this theme.*

### Taxes as Public Health Policy

The success of higher tobacco taxes in reducing cigarette smoking, other tobacco product use, and the death, disease, and economic costs caused by tobacco use is a key factor in explaining interest in using sugar-sweetened beverage (SSB) taxes as a policy tool for curbing the obesity epidemic in the United States (Brownell and Frieden, 2009). A large, global, and growing evidence base clearly demonstrates that higher cigarette and other tobacco product taxes lead current users to quit, keep former users from restarting, prevent young people from taking up tobacco use, and reduce consumption among those who continue to use (International Agency for Research on Cancer (IARC), in press). At the same time, tobacco tax increases generate considerable new revenue which some governments use to support comprehensive tobacco control programs that lead to further reductions in tobacco use and its consequences. This paper briefly reviews the findings from research on the effectiveness of higher tobacco taxes in reducing tobacco use, as well as the evidence addressing the frequently used arguments raised in opposition to tobacco tax increases; highlights the “best practices” in tobacco taxation; and discusses the implications for SSB taxes.

### Tobacco and SSB Taxation

Taxes on tobacco products are ubiquitous. The United States and nearly every other nation’s government around the world levies taxes on tobacco products, including excise and other tobacco-specific taxes, value added or sales taxes, and import duties (World Health Organization (WHO), 2010). Every U.S. state imposes an excise tax on cigarettes, and all but Pennsylvania levy excises on other tobacco products. Currently, the federal cigarette excise tax is just over \$1.00 per pack and state cigarette excise taxes range from a low of 17 cents per pack in Missouri to \$4.35 per pack in New York. Many localities levy additional excise taxes, with local cigarette taxes that add as much as \$2.68 per pack in Chicago—including both city and county taxes—and \$1.50 per pack in New York City. In the vast majority of states with sales taxes, the tax is applied to tobacco product prices inclusive of excises. Over the past decade, the federal government and all but a handful of states have increased their tobacco excise taxes, with many states adopting multiple and sizable increases. Since 1990, average state cigarette excise taxes have risen nearly five-fold, while the federal tax has gone up more than six-fold. As a result of these substantial tax increases, inflation-adjusted prices of cigarettes and other tobacco products have risen dramatically, with taxes in the U.S. accounting for well over 40% of retail cigarette prices, inclusive of all taxes. In countries that have been even more aggressive in raising tobacco taxes over the past few decades, these taxes account for 75% or more of prices.

In contrast, very few governments, including seven U.S. states, levy small taxes that are unique to soft drinks and other non-alcoholic beverages, and almost none of these, including the few state taxes, apply only to sugar-sweetened beverages (Chriqui, et al., 2011). However, most governments do impose their value added or sales

taxes on a variety of beverages, with about two-thirds of U.S. states levying sales taxes on carbonated soft drinks (Bridging the Gap, 2011). Again, none of these differentiate sugar-sweetened from unsweetened or artificially sweetened beverages. Given the low sales tax rates in the United States, these taxes add very little to retail prices, on average accounting for less than 5% of the tax inclusive price.

### **Taxes, Prices, Use, and Consequences**

Historically, tobacco taxes were primarily used to generate revenue, but the tax increases of the past two decades have increasingly resulted from policymakers' interests in using higher taxes to improve public health by reducing tobacco use and its consequences. A few decades ago, conventional wisdom held that tobacco use and other addictive behaviors were unresponsive to changes in prices. Since then, hundreds of studies by economic, public policy and public health researchers have clearly demonstrated that tobacco use does indeed follow the basic laws of economics and that higher tobacco product prices reduce tobacco use.

For the United States and other high-income countries, most studies assessing the impact of taxes and prices on tobacco use find that a 10% increase in the price of tobacco products will reduce overall tobacco use by 2% to 6% (IARC, in press). Studies based on individual-level survey data find that about half of the estimated reduction in overall consumption following a price increase results from reductions in the prevalence of tobacco use, largely reflecting increased quitting. Estimates indicate that a 10% price increase leads about 10% of smokers to try to quit smoking, with about 2% successful in doing so (IARC, in press). Numerous studies find that tobacco use among young people is particularly sensitive to price, with most studies concluding that reductions in their tobacco use are 2-3 times larger than the reductions in adult use (IARC, in press). Higher tobacco product prices lower youth tobacco use through reduced initiation and uptake, and are particularly effective in preventing young people from moving beyond experimentation and into regular tobacco use. Similarly, and consistent with economic theory, most studies from the United States and other high-income countries find that less educated and lower income populations are also more responsive to price (IARC, in press). Finally, a small but growing number of studies have demonstrated that increases in tobacco taxes and prices and the reductions in use that result lead to reductions in the death, disease, and economic costs caused by tobacco use (IARC, in press).

In contrast to the well-developed literature on taxes, prices and tobacco use, research on the impact of SSB and other beverage tax and prices on beverage consumption and its consequences, most notably obesity, is still in its infancy. Several studies show that beverage consumption responds to price, with estimates from these studies indicating that a 10% increase in beverage prices reduces overall consumption by about 8% (Andreyeva, Long, and Brownell, 2010). Fewer studies have looked at how changes in the prices of some beverages relative to the prices of others affect consumption patterns, generally finding that relative price changes result in substitution from consumption of those for which relative prices have risen to those that are relatively less costly (Lin, Smith, and Lee, 2010; and Fletcher, Frisvold, and Tefft, 2010). However, estimates of the extent of substitution among beverages are quite variable and lead to markedly different conclusions about the impact of SSB tax and price increases on overall caloric intake and weight outcomes. Studies that look directly at the impact of beverage taxes on weight outcomes, including indicators of obesity, find little or no impact of existing taxes on these outcomes, with some researchers attributing this to the low current tax rates described above (Sturm, et al., 2010; and Powell, Chriqui, and Chaloupka, 2009) while others attribute it to substitution to other caloric beverages (Fletcher, Frisvold, and Tefft, 2010). As with tobacco, a few studies that have looked at vulnerable populations—including young people, those on lower incomes, and those already at higher weight—generally find that consumption and weight outcomes in these populations are more responsive to prices (Powell and Chriqui, in press).

### **Political Economy of Tobacco and SSB Taxation**

A variety of arguments have often been raised in opposition to higher tobacco taxes by tobacco companies and their allies. Over the past few years, beverage companies and their allies have begun making some of the same arguments in opposition to SSB taxes. These arguments tap into the growing anti-tax, anti-government intervention sentiment reflected in the recent rise of the Tea Party in the United States; fears that tobacco and beverage taxes will result in job losses, black markets and other economic consequences; and concerns that these taxes will harm the poor (Brownell and Warner, 2009; and Chaloupka, in press). For tobacco taxes, the evidence clearly demonstrates that these arguments are either false or overstated; similar evidence is only beginning to emerge for SSB taxes.

While popular support for taxation is generally low, polling data consistently show significant, broad-based support for higher tobacco taxes that cuts across party lines (Campaign for Tobacco-Free Kids (CTFK), et al., 2010). Moreover, as many as two-thirds of voters, including a significant share of tobacco users, support sharp increases in tobacco taxes that dedicate some of the revenues generated by these taxes to programs that help adults quit and prevent

youth from taking up tobacco use (CTFK, 2010). As experiences show in California, Massachusetts, Arizona and many other states that earmark tobacco tax revenues for tobacco control programs, these programs add to the impact of higher taxes and lead to further reductions in tobacco use (Chaloupka, 2010). As the Centers for Disease Control and Prevention (CDC) describe, the “best practices” for comprehensive tobacco control programs include: state and community interventions that support tobacco control policy development and implementation; mass media and other health communication interventions to inform people about the harms caused by tobacco use; support for cessation among tobacco users interested in quitting; and effective surveillance, evaluation, and program management (CDC, 2007). While support for SSB taxes is more variable, there is majority support in many jurisdictions, particularly when the revenues that would be raised by an SSB tax are dedicated to obesity prevention programs (Rudd Center, 2011).

Fears about the economic consequences of tobacco taxation are similarly false or overstated. Research has demonstrated that higher tobacco taxes generally have no net impact on jobs as tobacco use falls (e.g. Warner, et al., 1996). Job losses in tobacco-dependent sectors of the economy are offset by job gains in other sectors as money no longer spent on tobacco products is spent on other goods and services and as the government spends new tobacco tax revenues, typically on more labor-intensive activities. Convenience stores and other merchants selling tobacco products are not put out of business as they likely raise prices by more than the amount of the tax increase to compensate for lost sales of tobacco products and see sales of other products rise (Huang and Chaloupka, in press). While tax increases do create incentives for tax avoidance and tax evasion, they continue to reduce tobacco use while generating new revenues (Merriman, Yurekli, and Chaloupka, 2000). Moreover, there are effective strategies available to governments for curbing tax avoidance and evasion in order to maximize the public health and revenue impacts of higher tobacco taxes (WHO, 2010; and Chaloupka, et al., in press). To date, opponents of SSB taxes have focused on the impact of these taxes on jobs in the beverage sector (Hahn, 2009). Ongoing research looking at the employment of SSB taxes that accounts for the job gains in other sectors due to changes in consumer and government spending, as well as the substitution to other untaxed beverages produced and bottled by the same companies, is likely to produce findings similar to those that demonstrate that higher tobacco taxes do not result in significant job losses and could even lead to a net increase in jobs.

Concerns about the impact of tobacco taxation on the poor have more merit. These concerns arise from the fact that existing tobacco taxes fall most heavily on the poor given the greater prevalence of tobacco use in lower socioeconomic populations. At the same time, these populations are most susceptible to the health and economic consequences of tobacco use, with tobacco use explaining a significant part of socioeconomic disparities in health (Bobak, et al., 2000). Given the greater response to price by low-income tobacco users, higher tobacco taxes can reduce the relative burden of these taxes on the poor given the larger reductions in their tobacco use compared to those among higher income populations, while the poor would receive relatively more of the health benefits that result from higher taxes (Chaloupka, et al, 2000; IARC, in press). Moreover, concerns about the impact of tobacco taxes on low-income smokers who continue to smoke despite higher cigarette prices have been addressed by dedicating some of the new tax revenues to programs targeting the poor, including those subsidizing tobacco cessation programs and products, expanding public health insurance programs, and other health promotion efforts. A similar approach that dedicates a portion of the revenue generated from SSB taxes to efforts to reduce and prevent obesity among the most disadvantaged populations could be used to alleviate concerns about the impact of an SSB tax on the poor. This could include expanding subsidies for fruits and vegetables in food assistance programs, providing weight loss programs and treatments to those on low incomes, and other such efforts.

### **Taxation as Public Health Policy - Best Practices**

Based on global experiences with a variety of tobacco tax structures, levels, and changes over time, WHO has developed a set of “best practices” for tobacco taxation as part of its *WHO Technical Manual on Tobacco Tax Administration* (WHO, 2010). Many, if not all, of these best practices, briefly discussed in this section, appear equally applicable to SSB taxes. Among the most relevant of these best practices are:

- Using excise taxes to achieve public health goals. WHO emphasizes excise taxes rather than sales or ad valorem taxes given that these are the taxes that will differentiate the relative prices of tobacco products from other products, something that would be true for SSB excise taxes and their prices. Moreover, WHO highlights the use of tobacco excise taxes to promote public health, while recognizing that these taxes will generate sustained revenues in the short- to medium- term— a principle that seems appropriate for SSB taxes as well.
- Relying on simple, specific excise tax structures that apply equally to all products. Specific, or per unit, tobacco excises have a greater public health impact than do ad valorem, or price based, excises given that they apply equally to all tobacco products and, as a result, minimize gaps in prices among similar products

as well as opportunities for substitution to cheaper brands/products in response to tax increases. For SSB taxes, this implies a tax based on volume or added sugars that would be the same on all sugar-sweetened beverages, from carbonated and other soft drinks to sports drinks, energy drinks, and flavored waters.

- Increasing specific excise taxes regularly to keep pace with inflation and to reduce affordability. The value of specific taxes will be eroded over time by inflation unless these taxes are regularly increased. Moreover, increases in income can make taxed products increasingly affordable. A couple of countries—Australia and New Zealand— automatically increase their specific tobacco taxes to keep pace with inflation, while other governments—most notably the United Kingdom—adopted annual tax increases that raised inflation-adjusted cigarette prices year after year. Similar approaches could be applied to SSB taxes.
- Using excise taxes as part of a comprehensive approach that includes dedicating a portion of tax revenues to control programs or health promotion efforts. This is based on evidence that comprehensive strategies that include tax increases lead to greater reductions in tobacco use than do tax increases alone. Funding such comprehensive programs with the revenues from tobacco taxes maximizes the public health impact of the tax while building public support for higher taxes. Polling data suggest that the same is true for SSB taxes—that dedicating SSB tax revenues to obesity prevention and control programs builds public support by providing a source of much-needed revenues for such efforts.
- Not allowing concerns about economic consequences of taxes prevent tax increases. As discussed above, oppositional arguments which raise fears that higher tobacco taxes result in significant job losses, black markets in tobacco products, and harm the poor are either false or overstated. The same appears likely for arguments used in opposition to SSB taxes.
- Strengthen tax administration so as to minimize tax avoidance and tax evasion and maximize the public health and revenue impacts of tax increases. Adoption of new technologies that monitor production, allow tracking and tracing of tobacco products through the distribution chain, and facilitate enforcement, combined with licensing of all involved in tobacco product manufacturing and distribution, have been demonstrated to be effective in reducing tobacco tax avoidance and evasion, with a greater impact when coupled with increased enforcement and swift and severe penalties. While concerns about avoidance and evasion of SSB taxes have not been prominent in the debate over these taxes, similar approaches could be adopted in order to ensure strong SSB tax administration.

### **Taxes Could Be An Answer**

Sizable tobacco excise tax increases are widely viewed as the single most effective strategy for reducing tobacco use and its consequences. Research consistently demonstrates that these higher taxes lead current users to quit, keep former users from restarting, prevent young people from taking up tobacco use, and reduce tobacco consumption among those who continue to use. At the same time, these taxes generate significant revenues that can be used to support additional, effective interventions to reduce tobacco use and the death, disease and economic costs it causes. This evidence has led numerous national, state and local governments to significantly increase their tobacco taxes over the past two decades, pushing youth and adult tobacco prevalence rates to their lowest levels in decades. The success of tobacco taxation as a public health policy, when coupled with the increased awareness of the role of SSBs in causing a variety of health consequences and in contributing to the obesity epidemic in the United States, has led to calls for governments to adopt significant SSB taxes. Proposals for such taxes have been highly controversial, with the beverage industry and other opponents using many of the same false or misleading arguments used by tobacco companies and their allies in opposition to tobacco taxes. While evidence on the impact of SSB taxes in reducing obesity is mixed and research addressing most oppositional arguments has yet to emerge, the experiences with tobacco taxes suggest that sizable SSB taxes would lead to significant reductions in SSB consumption and its direct health consequences. They almost certainly would reduce obesity, while generating revenues that could fund other obesity prevention and control programs, raising support for such taxes. Implementing SSB taxes following the best practices WHO has outlined for tobacco taxes would maximize the public health and revenue impact of these taxes.

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